

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:57 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1145 Const Calendar Day: 718 Date: 23-May-2014 Friday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather**

Temperature 7 AM

12 PM

4PM

Precipitation

Condition overcast am, clear pm

Working Day ☒ If no, explain:**Diary:**

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:



ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field on setup of TR's 14-17. Crews at the Pier 7 warehouse area are working an 8-hour shift 0600 through 1430; however, because of the upcoming 3-day weekend (Memorial Day Holiday), ABF is having a lunch event and sending the ironworkers home after lunch with 8 hour pay. Ironworker Jared Garrett works all day on CCO 314 – 0600 to 1100. There are no laborers or operators assisting with the work today.

At the start of the shift, the ironworker beings work at the TR 15S bellows/flashing, after doing work yesterday afternoon at TR 15N. The flashing/bellows and plate washer at TR 15S are bolted using 1/4" hardware to the diaphragm plate. Note that caulking (Loctite 598 High Performance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber) is applied between the flashing flange and the diaphragm plate. The 1/4" hardware bolt heads are in the wet chamber and the nuts are tightened from the dry chamber side with access through the handhole in the top of the test rig. Then, at the dry chamber side, in the area of the diaphragm plate, flashing flange, and plate washer, caulking is applied all around. The caulking used is Loctite 598 High Performance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber. Then the bolt heads inside the wet chamber are covered with caulk to isolate that mechanically galvanized material from the wet chamber and to assist with sealing. The nuts in the dry chamber are also caulked to assist with sealing the wet chamber. The caulking used on the bolt heads and nuts is the Loctite 598 High Performance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber. The bellows/flashing work at TR 15S is completed by 0640.

Then, where most work was completed at TR 15N yesterday, caulking (Loctite 598 High Performance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber) is applied over the 1/4" nuts and bolt heads. At this point, all the flashing/bellows work at TR 15S and 15N is complete except the addition of the hose clamp and the caulking at the rod to flashing/bellows joint.

The ironworker than does a final cleanup (no laborer available) with a shop vacuum inside the TR 15S and TR15N wet chambers. Then the ironworker (no operator or second ironworker available) with an extendable forklift erects the TR 15S end plate starting at ~0700 and the TR 15N end plate starting at ~0815. For each location (TR15S and TR 15N), he uses a bead of Loctite 598 High Performance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber – between the end plate being erected and the end plate welded to the test rig. Then the temporary A325 bolt assemblies with nuts



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and washers are installed to attach each end plate. The holes in the top of the test rig at the wet chamber are covered with tape to prevent debris or any accidental dropping of items into the wet chamber. The A325 bolt assemblies are tensioned by the turn of the nut method after first snug tightening the joint. This A325 bolt assembly tensioning work is complete by about 0900.

After 0900, the ironworker begins work on the test rod nuts and washers at TR 15. At TR15S, Teflon plumbers tape is added to the test rod in the area of the back half of the nut – wrap 2 times, for 1.5" of the 3" tall nut, keeping away from the area of the first thread of the nut engagement with the rod. The start of the Teflon plumbers tape and planned end point of the nut starts 6-1/8" from the stickout end of TR 15S to leave 6" plus a small gap for the engagement of the coupler that will extend the test rod with the jacking rod. Then, the nut at TR 15N is installed temporarily without Teflon plumbers tape – the nut will need to be removed for future work to etch the intentional holiday in the galvanizing at the rod's first thread engagement with the nut.

For the TR 7 test rod for which testing was completed in February, lab testing is now scheduled to begin soon to pull it to failure (couldn't pull to failure in February due to failure of the jacks). The DJV and CT-METS have requested the removal of the cylindrical sleeve that was located at the diaphragm between the wet chamber and the dry chamber, but the removal a few weeks ago and again yesterday was unsuccessful. Yesterday, the ironworkers were able to move the cylindrical sleeve about 3" to 4" before it got stuck. The cylindrical sleeve was advanced onto a portion of the rod that had been cleaned the day before (wire wheel brush removed zinc oxide / white rust and other debris) and the area where the cylindrical sleeve partially engaged previously has residue from the thread sealant. Today, the thread sealant is cleaned (wire wheel brush, hand brush, brake cleaner) from about 3" to 4" of the rod where the cylindrical sleeve partially engaged previously. Then the cylindrical sleeve is moved backwards past where it was before and more thread sealant is cleaned. This operation of moving the cylindrical sleeve back and forth and cleaning thread sealant from the rod where the cylindrical sleeve was located is repeated a few times, with the cylindrical sleeve getting a little farther each time. The cylindrical sleeve is not removed by the end of the shift.

This afternoon about 1245, CT-METS (Elijah Turner and Saied Khan) visit the TR 7 rod to take additional photos requested by the DJV of the area where the nut was engaged. Previously, CT-METS had taken photos of this area and sampled zinc oxide / white rust, but the DJV today requested additional photos. Note that the area of the nut engagement was not affected by past cleaning operation by ABF in the attempts to remove the cylindrical sleeve. After the additional photos of the nut engagement area are taken today, this area can be cleaned.

I have a conference call with Dave Van Dyke and Rob Rutledge of VGO and Kelvin Chen of ABF to discuss the displacement transducers for TR's 14-17. I tell them to use the originally detailed displacement transducer system with 3" of instrumentation range. We discuss recovering the instrumentation range lost from initial take up in the test rigs by resetting the displacement transducers at a low load like the 0.10 Fu snug tight load or the 0.30 Fu first load step. I tell VGO to proceed with the 5/21/2014 order of the third set of displacement transducers for a monitoring range between the two ranges already available.

The couplers for TR's 16 & 17 were shipped by Dyson a week ago on Friday 5/16/2014, but have not arrived yet. These new couplers are necessary because the previously fabricated couplers for TR's 1-4 are with 4" 8UN threads at one end and 3" UNC threads tapped oversized for galvanizing at the other end, but the test rods with 3" UNC threads for TR's 16 & 17 are not galvanized. ABF inquired with Dyson about the delivery yesterday and today, but there is no word yet on where they are in the shipping process. With ABF only working a half day in the field today, the couplers could not be unloaded this afternoon if they arrived late today.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work area. A 40kW generator – MQ Power 40 – ABF ID is used briefly (few minutes) to power a shop vacuum. A Hydraulic Pump for running the jacks is on idle/standby at the test rig work area. An oxyacetylene torch is on idle/standby at the test rig work area. A compressor – IR P185 ABF ID 000002 is used for a couple of

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hours to tension end plate bolts. An extendable forklift is used for an hour or two at the test rig work area and a small (CAT) forklift is used for an hour or two at the test rig work area. A Kubota Cart is used briefly by the ironworker at the test rig work area.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:

10' bought k-rail = 20 pieces

20' rented k-rail = 10 pieces

20' ABF k-rail = 6 pieces

The tabulation of the 20' ABF k-rail is as follows:

Two (2) 20' ABF k-rail at the north end of TR 17.

Two (2) 20' ABF k-rail at the north end of TR 16.

One (1) 20' ABF k-rail at TR 15 (longitudinal running).

One (1) 20' ABF k-rail at TR 14 (longitudinal running).

The agreed extra work with ABF is as follows:

Engineer Kelvin Chen - 1 hr

Ironworker Jared Garrett - 5 hrs

Radio - 5 hrs

Small Forklift - 1 hr

Extendable Forklift - 2 hrs

185 CFM Compressor - 2 hrs

Impact Gun - 2 hrs

k-rail: 6 pcs @20'

Crane Mats (12x12 - 5'x16') - 2 pcs

Crane Mats (12x12 - 5'x7') - 8 pcs

See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Office 2 hours: ABF's shift is 0600 to 1100 (short day due to upcoming 3-day holiday weekend), and I am present in the field most of the time between 0600 and 1100. Then I am in the office addressing several CCO 314 issues with CT-METS and the DJV, including a meeting with the DJV at 1530 to discuss cursory review comments on VGO's draft final report for Phase 1 of Test IV (TR's 1-4) informally received last week. My shift is 0600 to 1630 and my OT hours are 1430 to 1630.